Medicines optimisation reviews in patients taking PPIs

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Medicines optimisation is a new term, which can be defined as a means to achieve the best outcomes for patients from their medications. It fits with the objectives of the Quality, Innovation, Productivity and Prevention (QIPP) agenda and focuses on tailoring treatment to individual patients to reduce waste and improve the safety and efficacy of prescribing.

Proton pump inhibitor (PPI) prescribing is not immediately apparent as a starting point for medicines optimisation. PPIs are no longer included within the national QIPP Therapeutic Areas as in recent years, and even then the emphasis was always on increasing the use of low-cost generic drugs rather than reducing overall usage.

However, there are growing safety concerns around long-term use, prompting a caution in the BNF relating to increased fracture risk and hypomagnesaemia, and their use in patients at risk of Clostridium difficile has also been highlighted. NICE dyspepsia guidance recommends that patients should be reviewed and stepped down to maintenance doses with the aim of stopping treatment once symptoms are controlled. Many prescribers perceive a number of issues including patients’ reluctance to stop medication that is improving their quality of life and the likelihood of their re-presenting when symptoms return as reasons not to adopt this guidance.

Rebound hyperacidity leading to acute reflux symptoms after stepping down or stopping PPIs has been a documented effect for several years and has even been shown to occur in previously nonsymptomatic individuals. Anticipating this effect and helping manage it with short-term use of an alginate may increase patients’ willingness to reduce PPI use and maintain this long term.

With these thoughts in mind the three practices that made up the former Fleetwood Clinical Commissioning Group (CCG) considered their need to review PPI prescribing. As patients on PPIs may also be prescribed medication requiring gastroprotection or contributing to their GI symptoms, we wondered if it would be possible to optimise the use of other medications in these polypharmacy patients. If so, we thought that this may help to meet Quality and Outcomes Framework (QOF) medication review targets.

We also considered the possibility of using existing chronic disease management appointments to conduct reviews...
and thus make the process sustainable in the long term.

**Review process**

In order to answer these questions a baseline audit was carried out. The results showed:

- 25 per cent of patients eligible for QOF medication review were prescribed a PPI
- 77 per cent of PPI patients were taking four or more medications and 29 per cent 10 or more
- 52 per cent of PPI patients were seen in chronic disease management clinics.

These results confirmed our original ideas about the potential benefits of medication reviews for patients prescribed PPIs.

The review process was as follows:

- due appointment in chronic disease clinic – seen by practice nurse in clinic
- chronic disease not due clinic appointment – seen by external gastroenterology nurse specialist.
- not seen in chronic disease clinics – seen by practice pharmacist.

An initial four-month review period was chosen to assess the effectiveness and sustainability of the process. In order to achieve sufficient patient numbers external gastroenterology nurse specialists were used in addition to practice nurses. They attended an educational session for practice nurses where the rationale and process for reviews was presented.

Practice pharmacists produced evidence-based prescribing guidelines for PPIs and also for NSAIDs and SSRIs, as these were found in the audit to be the largest groups of medicines co-prescribed with PPIs that required gastroprotection or may have contributed to GI symptoms. Patient information leaflets were also produced for these groups of drugs together with one on lifestyle advice, and a patient satisfaction questionnaire was developed for use at review. During the review process a GP education session was held with a gastroenterologist to discuss the audit and interim review results together with issues around PPI usage.

**Outcomes**

A total of 792 patients were seen in practice during the four-month period; 329 medications were stopped and 218 started (this figure includes lower doses of PPIs where dose reduced). All patients who had their doses reduced or PPIs stopped received an acute supply of licensed alginate to help manage rebound hyperacidity, which may account for the low numbers of patients returning to original PPI usage (see Table 2).

Of the additional medications changed 46 NSAIDs were stopped and 14 doses were reduced. One patient had an SSRI stopped and three had doses decreased. The mental-health team felt that the protocol for reducing SSRIs and patient information

<table>
<thead>
<tr>
<th>Pharmacists</th>
<th>Nurses</th>
<th>GPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPI dose stepped down</td>
<td>47 (32%)</td>
<td>104 (42%)</td>
</tr>
<tr>
<td>Dose later increased</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>PPI stopped</td>
<td>44 (30%)</td>
<td>100 (38%)</td>
</tr>
<tr>
<td>PPI later re-started</td>
<td>12</td>
<td>28</td>
</tr>
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Table 2. Outcomes following medicines optimisation review
leaflets would be of continuing benefit when reviewing their patients.

The annual recurrent prescribing savings made were £5629 across the three practices. If this was extrapolated across all patients on PPIs the figure would be around £16 000 for a combined population of 25 000 patients, and at CCG level this would amount to over £100 000 in annual prescribing savings. In addition to savings made at reviews, an additional 170 interventions were identified from the audit. The cost of acute alginate prescribing is accounted for in the savings totals.

Figure 1 shows the results of the patient satisfaction questionnaire; 110 patients (14 per cent) responded. Comments from patients were extremely positive and highlighted the fact that they welcomed the chance to have a face-to-face review and ask questions that they would not have wanted to bother a GP with.

Following on from the project the rate of increase in PPI prescribing across the three practices is now lower than the average for the north-west of England showing that by raising the issues around PPI prescribing and how to manage patients when stepping down or off treatment has lead to a change in prescribing behaviour.

Conclusion

Overall the review of patients prescribed PPIs has met the objectives of the QIPP agenda and provided medicines optimisation for a diverse group of patients as follows:
• increased patient safety by reducing use of PPIs and other high-risk medications in polypharmacy patients
• improved patient outcomes by managing symptom control and providing lifestyle advice for self-management
• increased patient satisfaction and involvement in treatments
• optimised use of healthcare professionals in medication review
• improved cost effectiveness by reducing polypharmacy
• influenced future prescribing by increasing awareness of appropriate patient management.

This medicines review could easily be replicated in other practices to achieve these benefits. We have demonstrated that patients are willing to adjust their usage of PPIs and other medications when they are involved in the review process and should be encouraged to do so.

References

Declaration of interests
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